

(4)



THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Mohammed N. Islam
Serial No.: 10/004,095
Filing Date: December 3, 2001
Group Art Unit: Unknown
Examiner: Unknown
Title: OPTICAL ROUTING USING A STAR SWITCHING FABRIC

Assistant Commissioner
for Patents
Washington, DC 20231

Dear Sir:

INFORMATION DISCLOSURE STATEMENT

Applicant respectfully requests, pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, that the references listed on the attached PTO-1449 form be considered and cited in the examination of the above-identified patent application. Copies of the references are enclosed for the convenience of the Examiner. No representation is made that a search has been made, that the references are material to the patentability of the present application, or that the references qualify as prior art.

REMARKS

This Information Disclosure Statement is being submitted pursuant to 37 C.F.R. § 1.97(b) before the issuance of a first Office Action and, therefore, no fee is believed to be due. If, however, a fee is due, the Commissioner is hereby authorized to charge such fee to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

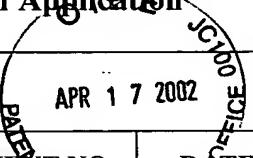
Baker Botts L.L.P.
Attorneys for Applicant


Douglas M. Kubehl
Reg. No. 41,915

Correspondence Address:

Douglas M. Kubehl, Esq.
Baker Botts L.L.P.
2001 Ross Avenue, Suite 600
Dallas, Texas 75201-2980
Phone: (214) 953-6487
Fax: (214) 661-4487

Date: April 17, 2002

Information Disclosure Citation in an Application 		Application No. 10/004,095	Applicant(s) Mohammed N. Islam	
		Docket Number 068069.0114	Group Art Unit	Filing Date December 3, 2001

APR 17 2002

U.S. PATENT DOCUMENTS

		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	A	3,986,020	10/12/1976	Kogelnik	250	199	09/25/1975
	B	4,797,879	01/10/1989	Habbab et al.	370	3	06/05/1987
	C	4,873,681	10/10/1989	Arthurs et al.	370	3	01/26/1988
	D	4,970,714	11/13/1990	Chen et al.	370	17	01/05/1989
	E	5,005,167	04/02/1991	Arthurs et al.	370	4	10/11/1989
	F	5,063,612	11/05/1991	McKeown	455	607	08/03/1990
	G	5,093,743	03/03/1992	Eng et al.,	359	120	12/28/1990
	H	5,103,340	04/07/1992	Dono et al.	359	578	02/21/1989
	I	5,140,655	08/18/1992	Bergmann	385	46	08/07/1991
	J	5,191,626	03/02/1993	Stern	385	24	04/22/1991
	K	5,206,638	04/27/1993	McKeown	340	825.510	01/28/1991
	L	5,257,113	10/26/1993	Chen et al.	358	426	09/20/1991
	M	5,301,052	04/05/1994	Audouin et al.	359	124	01/24/1992
	N	5,343,542	08/30/1994	Kash et al.	385	31	04/22/1993
	O	5,361,254	5,361,254	Storck et al.	370	57	11/30/1992

FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
P		0 412 220 A1	11/08/1989	EP	H04L	12/44	X	
Q		0 439 646 A1	30/01/1990	EP	H04L	12/44	X	
R		0 419 840 A2	22/08/1990	EP	H04L	12/56	X	

NON-PATENT DOCUMENTS

	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
S	Arthurs et al., "HYPASS: An Optoelectronic Hybrid Packet Switching System," IEEE Journal on Selected Areas in Communications, Vol. 6, No. 9, pp. 1500-1510	12/1988
T		
U		

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

U.S. PATENT AND TRADEMARK OFFICE

PTO-1449 Information Disclosure Citation in an Application		Application No. 10/004,095	Applicant(s) Mohammed N. Islam
		Docket Number 068069.0114	Group Art Unit
		Filing Date December 3, 2001	

APR 17 2002

U.S. PATENT DOCUMENTS

		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	A	5,452,115	09/19/1995	Tomioka	359	123	04/22/1994
	B	5,455,699	10/03/1995	Glance et al.	359	125	12/21/1993
	C	5,455,701	10/03/1995	Eng et al.	359	135	03/28/1994
	D	5,485,297	01/16/1996	Sotom	359	123	10/09/1992
	E	5,500,858	03/19/1996	McKeown	370	60	12/20/1994
	F	5,506,712	04/09/1996	Sasayama et al.	359	123	07/14/1994
	G	5,515,361	05/07/1996	Li et al.	370	15	02/24/1995
	H	5,519,526	05/21/1996	Chua et al.	359	152	10/21/1992
	I	5,521,732	05/28/1996	Nishio	359	120	06/08/1994
	J	5,539,559	07/23/1996	Cisneros et al.	359	117	08/21/1992
	K	5,729,527	03/17/1998	Gerstel et al.	370	228	03/19/1996
	L	5,739,945	04/14/1998	Tayebati	359	291	09/27/1996
	M	5,781,537	07/14/1998	Ramaswami et al.	370	254	07/07/1995
	N	5,793,746	08/11/1998	Gerstel et al.	370	228	04/29/1996
	O	5,825,949	10/20/1998	Choy et al.	385	24	04/03/1997

FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	P	2-278132	14/11/1990	JP	H01S	003/08	X	
	Q	6-350563	22/12/1994	JP	H04J	014/02	X	
	R	0 667 690 A2	24/01/1995	EP	H04J	14/02	X	

NON-PATENT DOCUMENTS

S	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
T	Chen et al., "A Media-Access Protocol for Packet-Switched Wavelength Division Multiaccess Metropolitan Area Networks," IEEE Journal on Selected Areas in Communications, Vol. 8, No. 6, pp. 1048-1057	08/1990

EXAMINER**DATE CONSIDERED**

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

U.S. PATENT AND TRADEMARK OFFICE

PTO-1449 Information Disclosure Citation in an Application		Application No. 10/004,095	Applicant(s) Mohammed N. Islam	
		Docket Number 068069.0114	Group Art Unit	Filing Date December 3, 2001

APR 17 2002

U.S. PATENT DOCUMENTS

		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	A	5,847,852	12/08/1998	Domon et al.	359	118	03/05/1997
	B	5,864,414	01/26/1999	Barnsley et al.	359	125	07/26/1996
	C	5,889,600	03/30/1999	McGuire	359	128	10/24/1994
	D	5,915,054	06/22/1999	Ota	385	46	06/02/1995
	E	55,923,644	07/13/1999	McKeown et al.	370	230	10/03/1996
	F	5,926,299	07/20/1999	Bayart et al.	359	121	12/24/1996
	G	5,949,801	09/07/1999	Tayebati	372	20	07/22/1998
	H	6,025,944	02/15/2000	Mendez et al.	359	136	03/27/1997
	I	6,025,950	02/15/2000	Tayebati et al.	359	244	07/27/1998
	J	6,041,071	03/21/2000	Tayebati	372	64	09/27/1996
	K	6,097,533	08/01/2000	Atlas	359	337	10/21/1997
	L	6,108,112	08/22/2000	Touma	359	110	09/23/1997
	M	6,108,311	08/22/2000	Ramaswami et al.	370	258	04/29/1996
	N	6,147,786	11/14/2000	Pan	359	124	02/20/1998
	O	6,192,173 B1	02/20/2001	Solheim et al.	285	24	06/02/1999

FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	P	8-163048	21/06/1996	JP	H04J	014/02	X	
	Q	9-326780	16/12/1997	JP	H04J	014/02	X	
	R	98/05995	12/02/1998	WO	G02F	1/00	X	

NON-PATENT DOCUMENTS

	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
S	"39.5 Million-Way WDM Broadcast Network Employing Two Stages of Erbium-Doped Fibre Amplifiers," Electronics Letters, Vol. 26, No. 22, pp. 1882-1884	10/25/1990

EXAMINER _____ DATE CONSIDERED _____

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

U.S. PATENT AND TRADEMARK OFFICE

PTO-1449 Information Disclosure Citation in an Application		Application No. 10/004,095	Applicant(s) Mohammed N. Islam
		Docket Number 068069.0114	Group Art Unit
		Filing Date December 3, 2001	

APR 17 2002

U.S. PATENT DOCUMENTS

		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
A		6,212,182 B1	04/03/2001	McKeown	370	390	06/27/1996
B		6,301,274 B1	10/09/2001	Tayebati et al.	372	20	03/30/1999
C							
D							
E							
F							
G							
H							

FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
I		99/56433	04/11/1999	WO	H04L	12/00	X	
J		99/22496	06/05/1999	WO	H04L	12/44	X	
K		00/05832	03/02/2000	WO	G02B	6/26	X	
L		01/15368 A2	01/03/2001	WO	H04J	14/02	X	
M		01/18576 A1	15/03/2001	WO	H04J	14/00	X	

NON-PATENT DOCUMENTS

	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
N	"39·81 Gbit/s, 43·8 Million-Way WDM Broadcast Network with 527 km Range," Electronics Letters, Vol. 27, No. 22, pp. 2051-2053	10/24/1991
O	Appleton et al., "Modelling WDM Video Distributive Networks," The Institution of Electrical Engineers, pp. 1-4	1993
P	Agrawal, "Fiber-Optic Communication Systems," A Wiley-Interscience Publication, The Institute of Optics University of Rochester NY, pp. 284-360	1997
Q	Ford et al., "Fiber-Coupled Variable Attenuator Using a MARS Modulator," Invited Paper, SPIE, Vol. 3226, pp. 86-93	1997
R	Sadot et al., "Tunable Optical Filters for Dense WDM Networks," IEEE Communications Magazine, pp. 50-55	12/1998

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

U.S. PATENT AND TRADEMARK OFFICE

PTO-1449 Information Disclosure Citation in an Application		Application No. 10/004,095	Applicant(s) Mohammed N. Islam
		Docket Number 068069.0114	Group Art Unit
		Filing Date December 3, 2001	

APR 17 2002

U.S. PATENT DOCUMENTS

		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	A						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES
	B						NO

NON-PATENT DOCUMENTS

	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
C	Carena et al., "OPERA: An Optical Packet Experimental Routing Architecture with Label Swapping Capability," <i>Journal of Lightwave Technology</i> , Vol. 16, No. 12, pp. 2135-2145	12/1998
D	Misawa et al. "WDM Knockout Switch with Multi-Output-Port Wavelength-Channel Selectors," <i>Journal of Lightwave Technology</i> , Vol. 16, No. 12, pp. 2212-2219	12/1998
E	Sadot et al., "Optical Switching Speed Requirements for Terabit/Sec Packet Over WDM Networks," ECOC	1999
F	Elhanany et al., "A Novel Tbit/sec Switch Architecture for ATM/WDM High-Speed Networks," IEEE/IEICE ATM Workshop, Japan, pp. 97-101	1999
G	Elhanany et al., "Tbit/s switching scheme for ATM/WDM networks," Electronics Letters, Vol. 35, No. 1, 2 pages	01/07/1999
H	"A New Architecture for Switch and Router Design," PMC-Sierra, Inc., pp. 1-8	12/22/1999
I	Tsukada et al., "WDM/SCM Broadcast-and-select Architecture for Streaming-media," IEEE, pp. 358-359	2000
J	Pesach et al., "Free-space optical cross-connect switch by use of electroholography," <i>Applied Optics</i> , Vol. 39, No. 5, pp. 746-758	02/10/2000
K	Sadot et al., "Optical Switching Speed Requirements for Terabit/Second Packet Over WDM Networks," <i>IEEE Photonics Technology Letters</i> , Vol. 12, No. 4, pp. 440-442	04/2000
L	Goossen, "MEMS-Based Variable Optical Interference Device," IEEE, Invited MB1, pp. 17-18	08/2000
M	Shrikhande et al., "HORNET: A Packet-Over-WDM Multiple Access Metropolitan Area Ring Network," <i>IEEE Journal on Selected Areas in Communications</i> , Vol. 18, No. 10, pp. 2004-2016	10/2000
N	McKeown, "A quick tutorial on IP Router design," <i>Optics and Routing Seminar</i> , pp. 1-42	10/10/2000
O	McKeown, "How might optics be used in IP routers and the Internet?," <i>Optics and Routing Seminar</i> , pp. 1-36	10/24/2000
P	Chao et al., "An Optical Interconnection Network for Terabit IP Routers," <i>Journal of Lightwave Technology</i> , Vol. 18, No. 12, pp. 2095-2112	12/2000
Q	Elhanany et al., "A Prioritized Packet Scheduling Architecture for Provision of Quality-of-Service in Tbit/sec WDM Networks," IEEE, pp. 695-700	2000
R	Plastow et al., "Tunable lasers key to data-network migration," Lightwave, www.light-wave.com, pp. 148-152	03/2001
S	Dhar, "Seamless Optical Scaling: Enabling a Dynamic Network," <i>Fiberoptic Product News</i>	08/2001

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

U.S. PATENT AND TRADEMARK OFFICE

PTO-1449 Information Disclosure Citation in an Application			Application No. 10/004,095	Applicant(s) Mohammed N. Islam			
			Docket Number 068069.0114	Group Art Unit	Filing Date December 3, 2001		
U.S. PATENT DOCUMENTS							
		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	A						
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
	B						YES
		NON-PATENT DOCUMENTS					
		DOCUMENT (Including Author, Title, Source, and Pertinent Pages)					DATE
C		Dhar et al., "Tunable lasers create dynamic networking capabilities," WDM Solutions, pp. 82, 84, 86, and 88					09/2001
D		Nowak et al., "Stable supercontinuum generation in short lengths of conventional dispersion-shifted fiber," Department of Electrical Engineering and Computer Science, The University of Michigan, pp. 1-20					
E		Nowak et al., "Stable 200nm TDM/WDM source based on continuum generation in 2m of fiber," Department of Electrical Engineering and Computer Science, The University of Michigan, pp. 1-13					
F		"Comparison of Techniques for Multi-Tb/s TDM/WDM Source," The University of Michigan					
G		Fernandez et al., "TCP Switching: Exposing Circuits to IP," Stanford University, pp.1-6					
H		Walker et al., "Mechanical Anti-Reflection Switch (MARS) Device for Fiber-In-the-Loop Applications," Invited FA1, pp. 59-60					
I		McKeown, "Fast Switched Backplane for a Gigabit Switched Router," Department of Electrical Engineering, Standford University, CA, pp. 1-30					
J		"Broadcast and Distribution Networks," 7.1.2, pp. 289-297					
K		McKeown et al., "The Two-Stage Switch," Leland Stanford Junior University, 12 pages					
L		Fernandez, "Where Does Circuit Switching Make Sense In the Internet?," High Performance Networking Group, Stanford University, 19 pages					
M		Pending provisional patent application, USSN 60/336,779, (068069.0115), entitled "High Speed MEMS Device," by Islam et al., pp. 1-34					12/03/2001 Filed
N		Pending patent application, USSN 10/006,001, (068069.0116), entitled "Optical Routing Using Star Switching Fabric with Reduced Effective Switching Time," by Islam, pp. 1-94					12/03/2001 Filed
O		Pending patent application, USSN 10/005,998, (068069.0117), entitled "Method and Apparatus for Scheduling Communication Using a Star Switching Fabric," by Islam et al., pp. 1-83					12/03/2001 Filed
P		Pending patent application, USSN 10/004,996, (068069.0118), entitled "Broadcast and Select Optical Networking," by Islam et al., pp. 1-63					12/03/2001 Filed
EXAMINER			DATE CONSIDERED				
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.							

U.S. PATENT AND TRADEMARK OFFICE